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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/043,832	01/11/2002	Donn Nathan Boatman	8835	1184
27752	7590	10/28/2003	EXAMINER	
			NGUYEN, ANTHONY H	
			ART UNIT	PAPER NUMBER
			2854	
DATE MAILED: 10/28/2003				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/043,832	BOATMAN ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Anthony H Nguyen	2854

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
 THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 07 August 2003.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-22 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-22 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.
 

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.
 

If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
  - a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |                                                                                                              |                                                                              |
|--------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ . |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)              | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>6</u> . | 6) <input type="checkbox"/> Other: _____ .                                   |

***Claim Rejections - 35 U.S.C. § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 18-22 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, With respect to claims 18 and 22, it is unclear how the vacuum can be between at least about 66 SCFM and about 168 SCFM (claims 18 and 22 lines 4 and 5). Further, there is no proper antecedent basis for “the second set of air jets” (claim 13 line 2) and “the conveying velocity” (claim 22, lines 4 and 5). Additionally, the language “the largest cleaning fluid droplet” (claim 22 line 5) is indefinite since the “largest” is a comparative term for which no basis of comparison is provided and therefore it fails to particularly point and distinctly claim any structure.

***Claim Rejections - 35 U.S.C. § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) a patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1,2, 4-7, 11-13, and 17-21 are rejected under 35 U.S.C. § 103 (a) as being unpatentable over the admitted prior art of Figures 12 and 13 in view of Platsch (US 5,502,788).

With respect to claims 1,2,12, and 13, the admitted prior art of Figures 12 and 13 teaches a plenum (the upper part of Fig. 12), a head (the lower part of Fig. 12) which includes two banks of air jets and vacuum ports (which appears to have three vacuum ports) connected to the plenum and a nozzle inside one of the vacuum ports. The admitted prior art does not teach the banks of air jets which are offset to each other. However, Platsch teaches a drier 12 having two parallel rows or banks of air nozzles or air jets 32 and 34 in which a bank of air jets 32 is offset from a bank of air jets 34 as shown in Figures 3 and 4 of Platsch. Therefore, in view of the teaching of Platsch, it would have been obvious to one of ordinary skill in the art to modify the two banks of air jets of the admitted prior art by providing the bank of air jets which are offset from each other as taught by Platsch for optimum cleaning effects on the surface of a cylinder. With respect to claims 4, 18, 19 and 21, the selection of a desired velocity and the droplet size of the cleaning fluid would be obvious through routine experimentation in order to get best possible cleaning effects on the surface to be cleaned. With respect to claim 5,6,7, 11, Figures 12 (the bottom) of the admitted prior art shows a curve edge of the aerodynamic surface of the head relative the curve surface of a cylinder. With respect to claims 12 and 13, Fig.3 of Platsch shows one bank of air jets 34 which has more air jets than the second bank of air jets 32, and one bank of air jets is offset by one-half pitch form the second bank of air jets (Platsch, col.2 lines 55 and 56).

Claims 3, 15, and 16 are rejected under 35 U.S.C. § 103 (a) as being unpatentable over the admitted prior art of Figures 12 and 13 in view of Platsch as applied to claims 1,2, 4-7, 11-13, and 17-21 above, and further in view of Flynn et al. (US 4,872,920).

The admitted prior art of Figures 12 and 13 and Platsch teach all that is claimed, except for the nozzle which is positioned outboard of the vacuum ports. Flynn et al. teaches the nozzles 14 which positioned inside or outside the vacuum port 74 in the suction head 15 as shown in Figs. 2 and 4 of Flynn et al. Therefore, it would have been obvious to one of ordinary skill in the art to modify the cleaning apparatus of the admitted prior art of Figures 12 and 13 and Platsch by

positioning the nozzle outboard of the vacuum ports as taught by Flynn et al. for quickly mounting a selected nozzle to a head of a cleaning apparatus for cleaning. With respect to claim 16, note that the angle of the nozzle 14 of Flynn et al. which is positioned at the angle about -45° to the normal of the surface to be cleaned as shown in Fig. 2 is within the angle range as recited.

Claims 8-10, 14 and 20 are rejected under 35 U.S.C. § 103 (a) as being unpatentable over the admitted prior art of Figures 12 and 13 in view of Platsch as applied to claims 1,2, 4-7, 11-13, and 17-21 above, and further in view of Olbrant et al. (US 3,775,806).

With respect to claim 8, the admitted prior art of Figures 12, 13 and 1 Platsch teach all that is claimed, except for the partition of the vacuum ports having a beveled edge. Olbrant et al. teaches an apparatus for removing and collecting dust having a blowing box or a housing which includes a partition 4a having a beveled edge positioned inside a suction box 6. The beveled edge is positioned close to the inturned lips 27 or the outturned lips 38 to facilitate the flow of air to the suction box 36 (Olbrant et al., Figs.1,3 and 4). To one of ordinary skill in the art, it would have been obvious to modify the partition separating the vacuum port in the admitted prior art by providing the beveled edge as taught by Olbrant et al. for increasing the velocity of the cleaning fluid to the suction box. Note also that the admitted prior art of the Figure 13 which shows the beveled edges on both sides of the partitions closed the nozzle which is positioned inside the vacuum port (to the right of the Fig.13). With respect to claims 9, 14 and 20, the selection of a desired angle of the beveled edge would be obvious since the use of variety of angles to increase the speed of fluid is well known. Also, the selecting of a desired angel of the beveled edge would be obvious through routine experimentation for optimum flow of cleaning fluid to a suction box. With respect to claim 10, Figure 4 of Olbrant et al. shows a guiding bar 39 which functions as an anti-plate striping element. Therefore, it would have been obvious to one of ordinary skill in the art to modify the cleaning apparatus of the admitted prior

art of Figures 12,13 and Platsch by providing the anti-plate striping element as taught by Olbrant et al. for optimum of protecting of the surface to be cleaned.

***Response to Arguments***

Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection.

The objection to the drawings is withdrawn since a flexible plate and plate cylinder are not recited in the claims. The mistake is regretted.

Applicant argues that the Figures 12 and 13 of the admitted prior art do not teach or suggest the local velocity of the vacuum within the head and plenum which is greater than about 2.0 m/s for a cleaning droplet size of 450  $\mu\text{m}$  at a vacuum flow rate as recited.

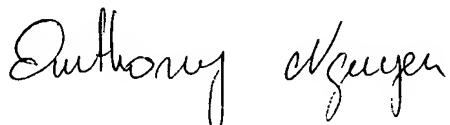
Applicant is corrected since the velocity, the very small droplet size and the flow rate cannot be shown in the Figures 12 and 13 of the admitted prior art. Clearly, the data of tables 1,2, and 3 in the specification shows the experiments between the prior art and the cleaning apparatus embodiments in terms of pressures and vacuums which relate to the admitted prior art, but there is no cleaning droplet size or the velocity of the vacuum as argued by applicant in the Remarks (the paragraph bridging pages 7 and 8). As explained above, the selection of a desired velocity, the droplet size of the cleaning fluid and the flow rate would be obvious through routine experimentation in order to get best possible cleaning effects on the surface to be cleaned. Thus, the selection of a desired velocity, the droplet size of the cleaning fluid and the flow rate is **NOT** unobvious in the sense of 35 U.S.C. 103. It is believed that the rejection is proper with respect to the Figures 12 and 13 of the admitted prior art alone.

*Conclusion*

The patent to Gieser et al. and Milone are cited to show other structures having obvious similarities to the claimed structure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony Nguyen whose telephone number is (703) 308-2869. The examiner can normally be reached daily from 9 AM to 5PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld, can be reached on (703) 305-6619. The fax phone number for this Group is (703) 308-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.



Anthony Nguyen  
10/22/03  
Patent Examiner  
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